



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN
APPLICATION TO AMEND A PENDING APPLICATION
FOR CONSTRUCTION PERMIT
BPCDT-19991101AEA
WDBB-DT- BESSEMER, ALABAMA
DTV - CH. 18 - 350 kW - 675 M HAAT**

Prepared for: WDBB-TV, Inc.

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a registered Professional Engineer in the Commonwealth of Virginia, Registration No. 7418, and in the State of New York, Registration No. 63418.

GENERAL

This office has been authorized by WDBB-TV, Inc., licensee of WDBB(TV), channel 17, Bessemer, Alabama, and applicant for construction permit for the paired Digital Television Allotment for WDBB-DT, channel 18, to prepare this statement, FCC Form 301, Sections III and III-D, and the associated exhibits in support of an application to amend its pending application for construction permit, BPCDT-19991101AEA. This application to amend WDBB-DT's pending application is necessary as a component of the applicant's efforts to implement its digital facility on DTV channel 18 by sharing a common antenna with WDBB(TV) on channel 17. In order to physically implement WDBB-DT and WDBB(TV) sharing the same antenna on the existing support structure the modifications proposed herein are required.

It is proposed herein to install a new Dielectric directional antenna, type TFU-26ETT-R CT160 DC, to be used by both WDBB-DT and WDBB(TV). The new antenna is to be mounted on the existing tower support structure located at 33E 28' 51" N latitude, 87E 24' 3" W longitude. The existing structure is registered in the FCC's tower registration database, #1035175, and is the site specified in WDBB-DT's allotment and its pending application. A request for a Special Temporary Authorization (STA) to permit WDBB(TV) to continue its current operations at this site was submitted on July 23, 2002, and is currently pending. An application for a construction permit, BPCT-20020723AAF, to authorize permanent operation by WDBB(TV) using the herein proposed antenna, at this site is also currently pending.

The modifications, as proposed herein, will serve to further the Commission's goals in the deployment of DTV service in the United States. The proposed new DTV antenna for WDBB-DT is designed to also accommodate WDBB(TV), which will allow DTV implementation without requiring extensive, time consuming tower modifications.

PROPOSED DIRECTIONAL ANTENNA

It is proposed to install a new directional antenna, Dielectric TFU-26ETT-R CT160 DC for use by WDBB-DT and WDBB(TV). Since the azimuth pattern of the proposed antenna differs from that specified in WDBB-DT's pending application, the instant amendment is required. Additionally, the proposed Effective Radiated Power is herein reduced to 350 kW to maintain compliance with the Commission's DTV interference rules.

The proposed directional transmitting antenna shall employ an electrical beam tilt of 0.40 degrees below the horizontal plane. The antenna manufacturer's horizontal plane azimuth radiation pattern, illustrating the proposed antenna's directional pattern characteristics is shown in Exhibit 2, and tabulated in Exhibit 3, and the vertical plane radiation pattern, illustrating the proposed antenna's radiation characteristics above and below the horizontal plane, is shown in Exhibit 4, and tabulated in Exhibit 5. A Vertical Plan Antenna Sketch is provided in Exhibit 1.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.684 of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the National Geophysical Data Center Thirty Second Point Database (TPG-0050) as prescribed in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. The predicted principal community (48 dBu) contour completely encompasses the principal community of license, shown in Exhibit 6, as required by Section 73.625(a) of the Commission's rules. The predicted 41 dBu contour is also shown in Exhibit 6.

ALLOCATION CONSIDERATIONS

NTSC Allocation Considerations

An interference study was performed, using the Commission's application analysis program, tv_process, to ensure that the proposed DTV facility is in compliance with the Commission's *de minimis* interference requirement contained in Section 73.623(c)(2) of the Commission's rules. The study showed that the DTV facility proposed herein is predicted to cause no increase in the interference population in excess of the Commission's *de minimis* criteria to any authorized NTSC television facility.

DTV Allocation Considerations

The same study was evaluated to determine if the proposed modification of WDBB-DT is predicted to cause any level of new prohibited interference to other authorized DTV facilities, including other DTV stations, DTV expansion construction permits, DTV allotments or pending DTV applications. The study results indicate that the instant proposal is predicted to cause no unacceptable level of new interference to the populations served by any other relevant DTV facility, and thereby is in compliance with the *de minimis* interference criteria contained in Section 73.623(c)(2) of the Commission's Rules.

Class A Television Allocation Considerations

As required in Section 73.623(c)(5) of the FCC's Rules, as established in the Report and Order establishing Class A Television Service, released April 4, 2000, a study of interference contour overlap was performed, based on the WDBB-DT facility proposed

herein, to establish compliance with the protection requirements contained therein. The study shows that, as a result of the changes proposed herein, no increase in prohibited contour overlap is predicted to occur with any LPTV station which was granted a Certificate of Eligibility for Class A Status in Public Notice DA 00-1224, Released June 2, 2000.

BLANKETING AND INTERMODULATION INTERFERENCE

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed WDBB-DT transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference created by this proposal in accordance with applicable Rules.

ENVIRONMENTAL CONSIDERATIONS

GENERAL

The proposal described herein meets the criteria specified in Section 1.1306 of the FCC Rules and Regulations as an action which is categorically excluded from environmental processing. The proposed TV facility involves neither a site location specified under Section 1.1307(a)(1)-(7) of the Rules nor high intensity lighting as specified in Section 1.1307(a)(8).

RADIO FREQUENCY IMPACT

Effective October 15, 1997, the FCC adopted new guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are

generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986), and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines provide a maximum permissible exposure (MPE) level for occupational or "controlled" situations that apply in cases that affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The FCC Maximum Permitted Exposure (MPE) level for "uncontrolled" environments is derived from the formula, $(\text{frequency}/1500)$, for UHF TV stations. The MPE level for UHF stations in a "controlled" environment is derived from the formula, $(\text{frequency}/300)$. The predicted emissions of WDBB-DT channel 18 must be considered, along with the predicted emissions from other proposed and existing stations at the current site. For WDBB-DT, which will operate on television Channel 18 (497 MHz), the MPE is 0.331 milliwatts per centimeter squared (mW/cm^2) in an "uncontrolled" environment and 1.655

mW/cm² in a "controlled" environment. The proposed WDBB-DT facility will operate with a maximum ERP of 350 kW from a horizontally polarized directional transmitting antenna with a centerline height of 599 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WDBB-DT facility is predicted to produce a power density at two meters above ground level of 0.00295 mW/cm², which is 0.89% of the FCC guideline value for "uncontrolled" environments, and 0.178% of the FCC guideline value for "controlled" environments (see Appendix A). The total percentage of the ANSI value at the proposed site, considering the cumulative radiation of all stations at the site, is only 12.13% of the limit for "uncontrolled" environments, and 2.43% of the limit for "controlled" environments.

OCCUPATIONAL SAFETY

The licensee of WDBB(TV) and applicant for WDBB-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WDBB-DT and TV antenna. The applicant is committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, when necessary, to ensure protection to personnel. As an additional safety measure, the base of the tower will be fenced to preclude casual access. In light of the above, the proposed WDBB-DT facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

SUMMARY

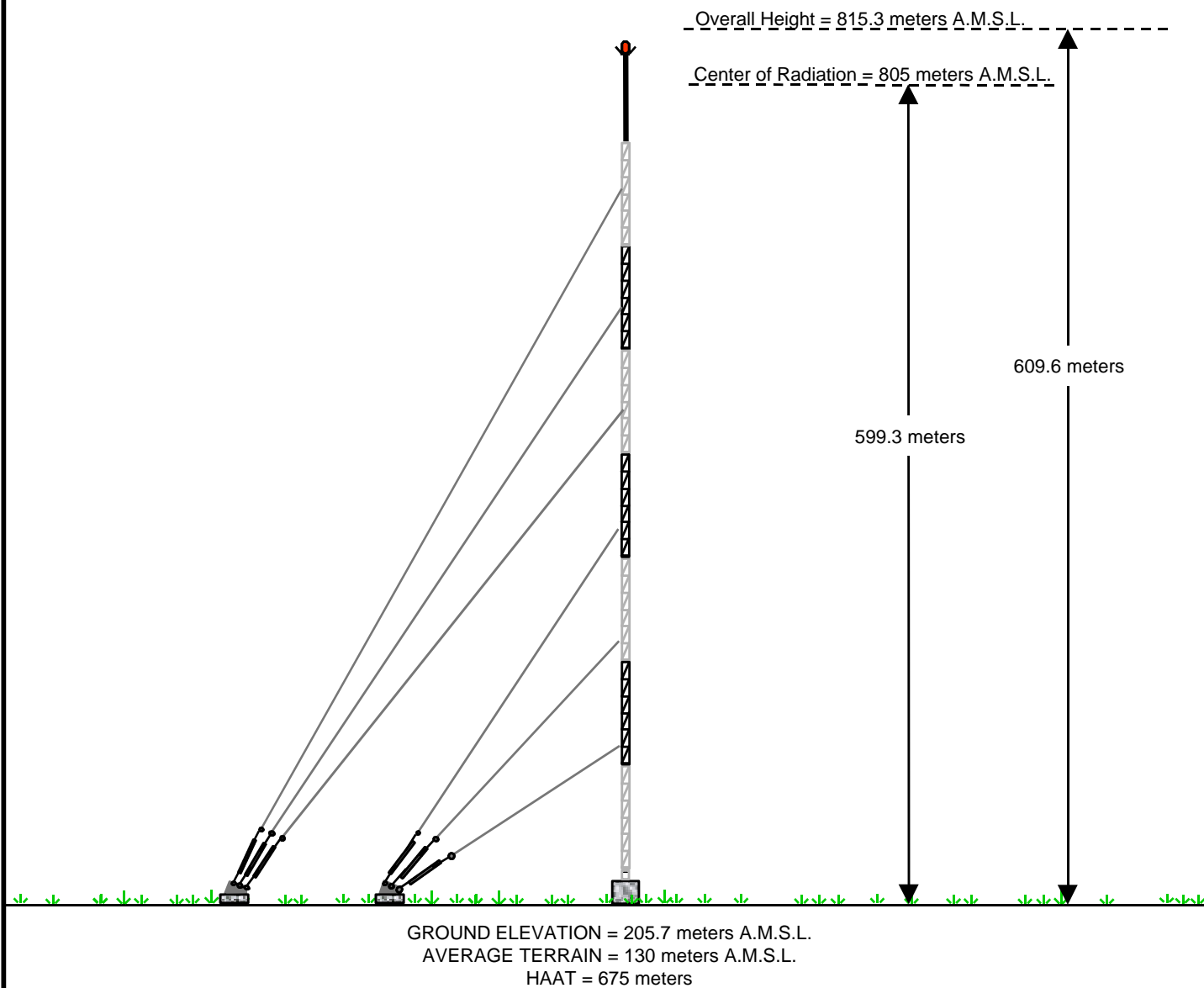
It is submitted that the instant proposal to amend WDBB-DT's pending application, BPCDT-19991101AEA, as described herein complies with the Rules and Regulations of the Federal Communications Commission. This statement, FCC Form 301, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: July 23, 2002


John E. Hidle, P.E.



COORDINATES NAD-27
NORTH LATITUDE: 33° 28' 51"
WEST LONGITUDE: 87° 24' 03"



VERTICAL PLAN ANTENNA SKETCH
WDBB-DT - BESSEMER, ALABAMA
Ch. 18, 350 kW, 675 M HAAT
JUNE, 2002

CARL T. JONES
CORPORATION

NOTE : NOT DRAWN TO SCALE



Proposal Number

DCA-8934

Revision:

1

Date

9-May-02

Exhibit 2

Call Letters

WDBB-DT

Channel

18

Location

Bessemer, AL

Customer

Antenna Type

TFU-26ETT-R CT160 DC

AZIMUTH PATTERN

Gain

1.60

(2.04 dB)

Calculated / Measured

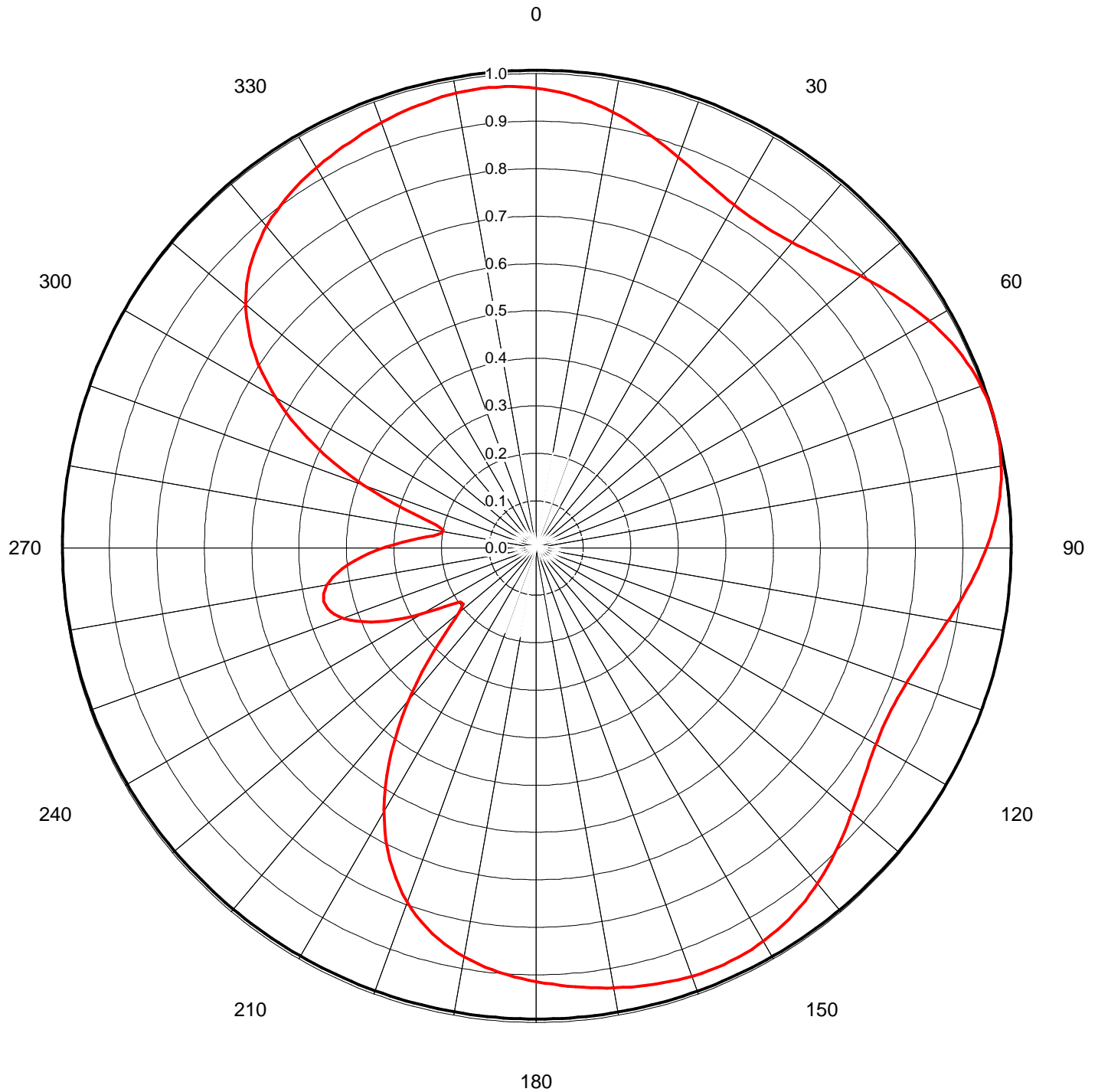
Calculated

Frequency

497.00 MHz

Drawing #

TFU-CT160-17/18





Proposal Number **DCA-8934** Revision: **1**
 Date **9-May-02**
 Call Letters **WDBB-DT** Channel **18**
 Location **Bessemer, AL**
 Customer
 Antenna Type **TFU-26ETT-R CT160 DC**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-CT160-17/18**

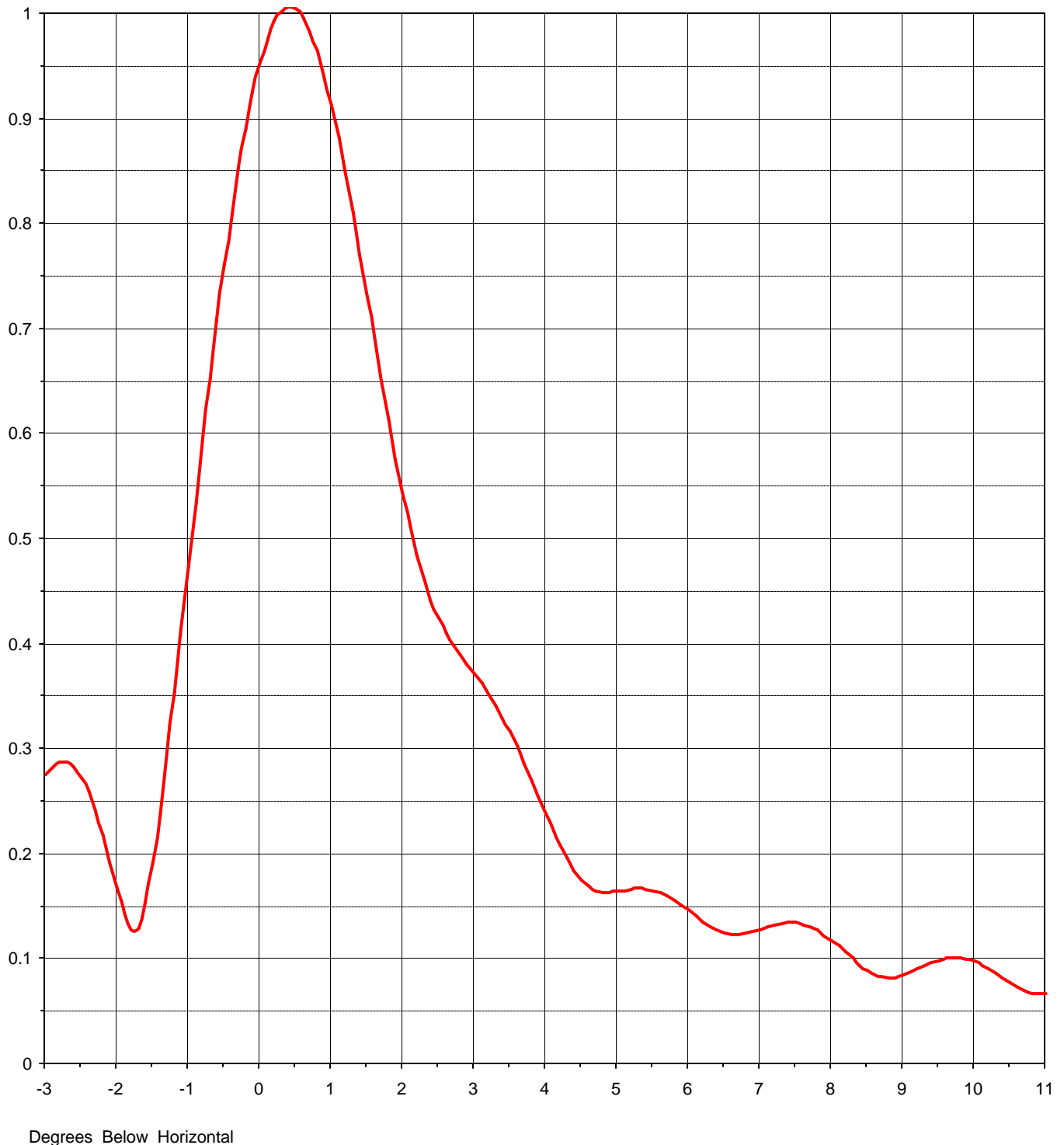
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.962	45	0.855	90	0.950	135	0.898	180	0.921	225	0.289	270	0.301	315	0.849
1	0.960	46	0.860	91	0.944	136	0.904	181	0.918	226	0.268	271	0.283	316	0.857
2	0.957	47	0.866	92	0.938	137	0.910	182	0.915	227	0.247	272	0.266	317	0.864
3	0.954	48	0.872	93	0.932	138	0.915	183	0.912	228	0.231	273	0.248	318	0.870
4	0.951	49	0.878	94	0.925	139	0.920	184	0.908	229	0.215	274	0.234	319	0.877
5	0.948	50	0.885	95	0.918	140	0.925	185	0.905	230	0.207	275	0.219	320	0.882
6	0.944	51	0.891	96	0.912	141	0.930	186	0.901	231	0.199	276	0.210	321	0.887
7	0.940	52	0.898	97	0.905	142	0.935	187	0.897	232	0.200	277	0.201	322	0.892
8	0.935	53	0.905	98	0.898	143	0.940	188	0.892	233	0.201	278	0.200	323	0.897
9	0.930	54	0.912	99	0.891	144	0.944	189	0.887	234	0.210	279	0.199	324	0.901
10	0.925	55	0.918	100	0.885	145	0.948	190	0.882	235	0.219	280	0.207	325	0.905
11	0.920	56	0.925	101	0.878	146	0.951	191	0.877	236	0.234	281	0.215	326	0.908
12	0.915	57	0.932	102	0.872	147	0.954	192	0.870	237	0.248	282	0.231	327	0.912
13	0.910	58	0.938	103	0.866	148	0.957	193	0.864	238	0.266	283	0.247	328	0.915
14	0.904	59	0.944	104	0.860	149	0.960	194	0.857	239	0.283	284	0.268	329	0.918
15	0.898	60	0.950	105	0.855	150	0.962	195	0.849	240	0.301	285	0.289	330	0.921
16	0.893	61	0.956	106	0.850	151	0.964	196	0.841	241	0.319	286	0.312	331	0.924
17	0.887	62	0.962	107	0.845	152	0.966	197	0.832	242	0.336	287	0.336	332	0.927
18	0.881	63	0.967	108	0.841	153	0.967	198	0.822	243	0.354	288	0.361	333	0.930
19	0.876	64	0.972	109	0.837	154	0.968	199	0.812	244	0.370	289	0.386	334	0.933
20	0.870	65	0.977	110	0.834	155	0.968	200	0.801	245	0.386	290	0.411	335	0.935
21	0.865	66	0.981	111	0.831	156	0.969	201	0.789	246	0.399	291	0.436	336	0.938
22	0.859	67	0.985	112	0.828	157	0.969	202	0.776	247	0.413	292	0.461	337	0.941
23	0.854	68	0.988	113	0.826	158	0.968	203	0.763	248	0.424	293	0.486	338	0.943
24	0.850	69	0.991	114	0.825	159	0.968	204	0.748	249	0.435	294	0.510	339	0.946
25	0.845	70	0.994	115	0.824	160	0.967	205	0.733	250	0.443	295	0.535	340	0.948
26	0.841	71	0.996	116	0.824	161	0.966	206	0.717	251	0.451	296	0.558	341	0.951
27	0.837	72	0.998	117	0.824	162	0.964	207	0.700	252	0.456	297	0.581	342	0.953
28	0.834	73	0.999	118	0.826	163	0.963	208	0.682	253	0.461	298	0.602	343	0.955
29	0.831	74	1.000	119	0.827	164	0.961	209	0.664	254	0.463	299	0.624	344	0.957
30	0.829	75	1.000	120	0.829	165	0.959	210	0.644	255	0.464	300	0.644	345	0.959
31	0.827	76	1.000	121	0.831	166	0.957	211	0.624	256	0.463	301	0.664	346	0.961
32	0.826	77	0.999	122	0.834	167	0.955	212	0.602	257	0.461	302	0.682	347	0.963
33	0.824	78	0.998	123	0.837	168	0.953	213	0.581	258	0.456	303	0.700	348	0.964
34	0.824	79	0.996	124	0.841	169	0.951	214	0.558	259	0.451	304	0.717	349	0.966
35	0.824	80	0.994	125	0.845	170	0.948	215	0.535	260	0.443	305	0.733	350	0.967
36	0.825	81	0.991	126	0.850	171	0.946	216	0.510	261	0.435	306	0.748	351	0.968
37	0.826	82	0.988	127	0.854	172	0.943	217	0.486	262	0.424	307	0.763	352	0.968
38	0.828	83	0.985	128	0.859	173	0.941	218	0.461	263	0.413	308	0.776	353	0.969
39	0.830	84	0.981	129	0.865	174	0.938	219	0.436	264	0.399	309	0.789	354	0.969
40	0.834	85	0.977	130	0.870	175	0.935	220	0.411	265	0.386	310	0.801	355	0.968
41	0.837	86	0.972	131	0.876	176	0.933	221	0.386	266	0.370	311	0.812	356	0.968
42	0.841	87	0.967	132	0.881	177	0.930	222	0.361	267	0.354	312	0.822	357	0.967
43	0.845	88	0.962	133	0.887	178	0.927	223	0.336	268	0.336	313	0.832	358	0.965
44	0.850	89	0.956	134	0.893	179	0.924	224	0.312	269	0.319	314	0.841	359	0.964



Proposal Number	DCA-8934	Revision:	1
Date	9-May-02		
Call Letters	WDBB-DT	Channel	18
Location	Bessemer, AL		
Customer			
Antenna Type	TFU-26ETT-R CT160 DC		

ELEVATION PATTERN

RMS Gain at Main Lobe	21.50 (13.32 dB)	Beam Tilt	0.40 deg
RMS Gain at Horizontal	19.30 (12.86 dB)	Frequency	497.00 MHz
Calculated / Measured	Calculated	Drawing #	26E215040



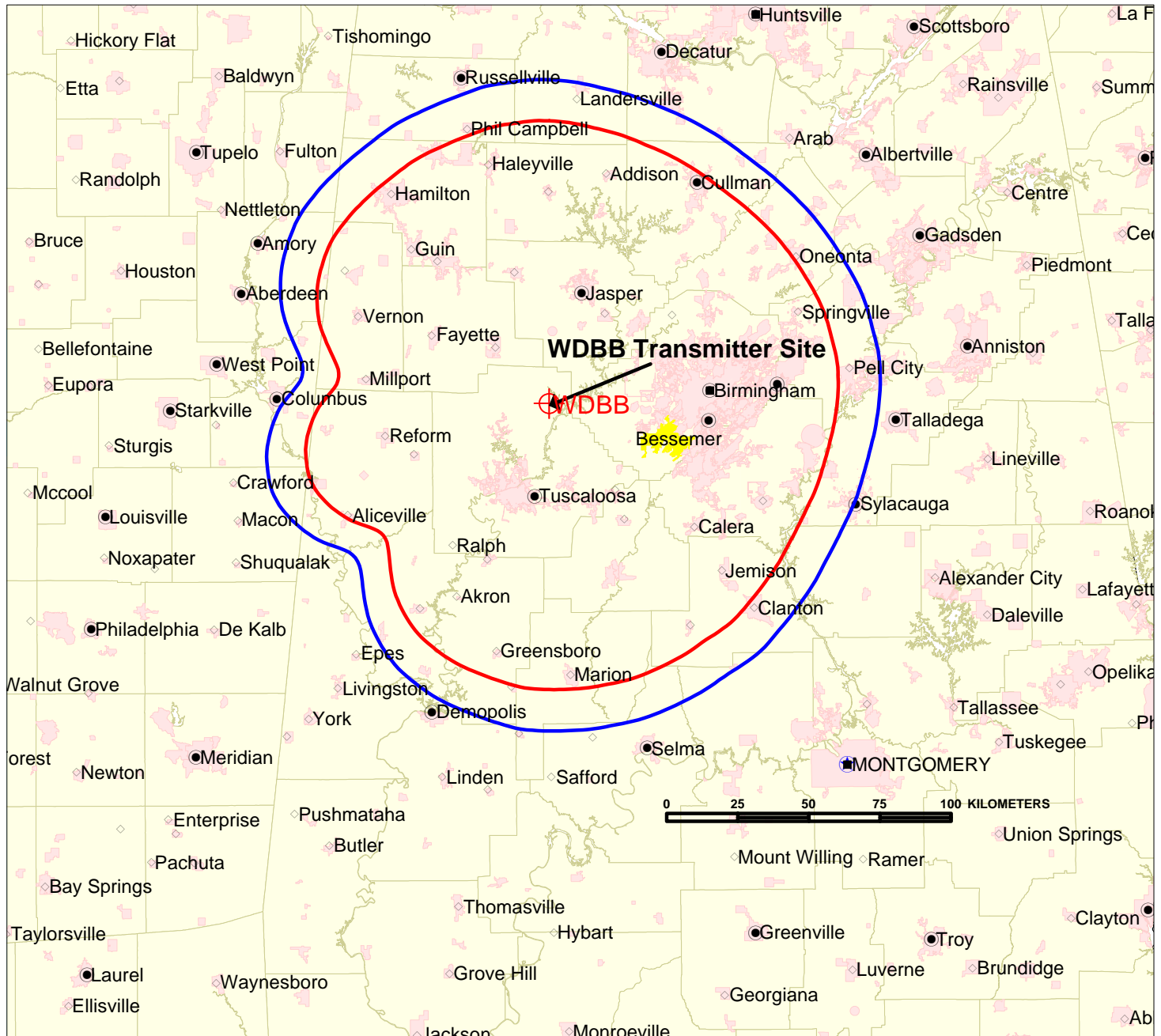


Proposal Number **DCA-8934** Revision: **1**
 Date **9-May-02**
 Call Letters **WDBB-DT** Channel **18**
 Location **Bessemer, AL**
 Customer
 Antenna Type **TFU-26ETT-R CT160 DC**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **26E215040-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.083	2.4	0.434	10.6	0.071	30.5	0.032	51.0	0.026	71.5	0.050
-9.5	0.104	2.6	0.404	10.8	0.063	31.0	0.048	51.5	0.039	72.0	0.045
-9.0	0.082	2.8	0.383	11.0	0.060	31.5	0.048	52.0	0.046	72.5	0.039
-8.5	0.046	3.0	0.365	11.5	0.073	32.0	0.033	52.5	0.045	73.0	0.032
-8.0	0.083	3.2	0.346	12.0	0.085	32.5	0.012	53.0	0.038	73.5	0.025
-7.5	0.128	3.4	0.323	12.5	0.075	33.0	0.026	53.5	0.026	74.0	0.019
-7.0	0.128	3.6	0.296	13.0	0.050	33.5	0.044	54.0	0.016	74.5	0.017
-6.5	0.081	3.8	0.264	13.5	0.048	34.0	0.049	54.5	0.020	75.0	0.019
-6.0	0.067	4.0	0.232	14.0	0.067	34.5	0.039	55.0	0.032	75.5	0.024
-5.5	0.131	4.2	0.202	14.5	0.072	35.0	0.019	55.5	0.041	76.0	0.031
-5.0	0.164	4.4	0.178	15.0	0.054	35.5	0.017	56.0	0.044	76.5	0.037
-4.5	0.137	4.6	0.163	15.5	0.037	36.0	0.037	56.5	0.041	77.0	0.042
-4.0	0.108	4.8	0.157	16.0	0.052	36.5	0.047	57.0	0.033	77.5	0.046
-3.5	0.186	5.0	0.158	16.5	0.067	37.0	0.043	57.5	0.023	78.0	0.050
-3.0	0.269	5.2	0.160	17.0	0.061	37.5	0.028	58.0	0.018	78.5	0.052
-2.8	0.281	5.4	0.160	17.5	0.038	38.0	0.011	58.5	0.024	79.0	0.054
-2.6	0.277	5.6	0.157	18.0	0.030	38.5	0.026	59.0	0.035	79.5	0.054
-2.4	0.253	5.8	0.150	18.5	0.053	39.0	0.042	59.5	0.043	80.0	0.054
-2.2	0.212	6.0	0.140	19.0	0.062	39.5	0.048	60.0	0.047	80.5	0.053
-2.0	0.161	6.2	0.129	19.5	0.050	40.0	0.040	60.5	0.047	81.0	0.051
-1.8	0.121	6.4	0.121	20.0	0.027	40.5	0.023	61.0	0.042	81.5	0.048
-1.6	0.146	6.6	0.117	20.5	0.034	41.0	0.012	61.5	0.033	82.0	0.046
-1.4	0.234	6.8	0.118	21.0	0.055	41.5	0.028	62.0	0.024	82.5	0.043
-1.2	0.347	7.0	0.122	21.5	0.058	42.0	0.042	62.5	0.019	83.0	0.039
-1.0	0.468	7.2	0.126	22.0	0.041	42.5	0.045	63.0	0.022	83.5	0.036
-0.8	0.588	7.4	0.128	22.5	0.019	43.0	0.037	63.5	0.031	84.0	0.032
-0.6	0.701	7.6	0.126	23.0	0.035	43.5	0.021	64.0	0.038	84.5	0.029
-0.4	0.802	7.8	0.121	23.5	0.054	44.0	0.013	64.5	0.044	85.0	0.025
-0.2	0.885	8.0	0.111	24.0	0.053	44.5	0.028	65.0	0.045	85.5	0.022
0.0	0.947	8.2	0.100	24.5	0.035	45.0	0.042	65.5	0.043	86.0	0.018
0.2	0.986	8.4	0.088	25.0	0.018	45.5	0.047	66.0	0.038	86.5	0.015
0.4	1.000	8.6	0.079	25.5	0.037	46.0	0.041	66.5	0.032	87.0	0.012
0.6	0.990	8.8	0.076	26.0	0.052	46.5	0.028	67.0	0.027	87.5	0.009
0.8	0.958	9.0	0.078	26.5	0.050	47.0	0.014	67.5	0.025	88.0	0.006
1.0	0.907	9.2	0.084	27.0	0.030	47.5	0.021	68.0	0.029	88.5	0.004
1.2	0.841	9.4	0.090	27.5	0.015	48.0	0.035	68.5	0.035	89.0	0.002
1.4	0.765	9.6	0.094	28.0	0.035	48.5	0.044	69.0	0.042	89.5	0.001
1.6	0.684	9.8	0.095	28.5	0.051	49.0	0.043	69.5	0.047	90.0	0.000
1.8	0.606	10.0	0.093	29.0	0.049	49.5	0.035	70.0	0.051		
2.0	0.536	10.2	0.088	29.5	0.031	50.0	0.021	70.5	0.053		
2.2	0.478	10.4	0.080	30.0	0.014	50.5	0.014	71.0	0.052		



48 dBu F(50,90) City Grade Coverage Contour

41 dBu F(50,90) Protected Coverage Contour

**WDBB-DT Proposed Shared Antenna
350 kW ERP, 675 m HAAT, Directional Antenna
Dielectric Model TFU-26ETT-R CT160 DC**

2000 Bessimer Corporate Limits

***WDBB-DT Channel 18, Bessemer, Alabama
Coverage Contours of Proposed Facility
Sharing Antenna with Analog Facility
June, 2002***

**CARL T. JONES
CORPORATION**

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

WDBB-DT, BESSEMER, ALABAMA
CHANNEL 18, 350 kW ERP, 675 m HAAT
JUNE, 2002

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT **</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm²)</u>	<u>PERCENT UNCONTROLLED LIMIT</u>
WDBB-DT	DT	18	497	H	597	350.000	0.300	0.00295	0.331	0.89%
WDBB-TV	TV	17	491	H	597	2240.000	0.300	0.00945	0.327	2.89%
WDXB(FM)	FM	273	102.5	H & V	562	79.000	1.000	0.01671	0.200	8.36%

TOTAL PERCENTAGE OF ANSI VALUE= 12.13%

*** The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.*